WHAT IS CLAIMED IS:

1. An endoscope comprising:

an inserting portion which can be inserted in a specimen;

an optical system for endoscope observation arranged in an edge of the inserting portion;

an optical system for microscopic observation which is arranged in the edge of the inserting portion and which microscopically observes an observing portion of the specimen;

a moving mechanism for adjusting an angle of view which is arranged in the edge of the inserting portion and which changes the angle of view by moving a part of the optical system for endoscope observation; and

a focal-point adjusting mechanism which is arranged in the edge of the inserting portion and which moves a focal point on the side of a subject in the optical system for microscopic observation,

wherein the moving mechanism for adjusting the angle of view and the focal-point adjusting mechanism are arranged forward and backward of the same axis to the inserting portion.

2. An endoscope according to Claim 1, wherein the

moving mechanism for adjusting the angle of view and the focal-point adjusting mechanism are arranged independently.

3. An endoscope according to Claim 1, wherein the moving mechanism for adjusting the angle of view and the focal-point adjusting mechanism are arranged integrally.

4. An endoscope according to Claim 1, wherein the moving mechanism for adjusting the angle of view and the focal-point adjusting mechanism have an actuator using a piezoelectric element.

5. An endoscope according to Claim 1, wherein the optical system for microscopic observation is projected in front of the optical system for endoscope observation, by the same distance as that between the observing portion and an optical-system edge lens when the angle of view of the optical system for endoscope observation is minimum.

6. An endoscope according to Claim 3, wherein an elastic member intervenes between the moving mechanism for adjusting the angle of view and the optical system for microscopic observation so that the moving mechanism for adjusting the angle of view can be moved out of a focal-point adjusting range of the optical system for microscopic

observation.

7. An endoscope according to Claim 1, wherein a heating portion in the moving mechanism for adjusting the angle of view is arranged to a portion other than the edge portion of the inserting portion, and

only a mechanism for changing an operating direction is arranged to the edge portion of the inserting portion.

8. An endoscope according to Claim 1, wherein the optical system for microscopic observation is a confocal optical system.

9. An endoscope according to Claim 1, wherein the optical system for microscopic observation comprises:

a high-magnification enlarging optical system;

image pick-up means;

a transparent optical window which is arranged forward of the high-magnification enlarging optical system and which can be touched to the subject; and

illuminating means which is independent of illuminating means for endoscope observation, and

an observing range of the high-magnification enlarging optical system is approximately 0 to 100 μm from the optical window.

10. An endoscope comprising:

an inserting portion which can be inserted in a specimen;

illuminating means which is arranged in an edge of the inserting portion;

a normal observing optical system which is arranged in the edge of the inserting portion and which forms an image of an illuminated subject; and

a confocal optical system which is arranged in the edge of the inserting portion with a high resolution, and

a waveform spilt element which is shared by the normal observing optical system and the confocal optical system is arranged to the closest side of the subject.

11. An endoscope according to Claim 10, wherein a lens surface is integrally formed to the waveform split element.

12. An endoscope according to Claim 11, wherein the lens surface is a concave lens surface which is formed on the side of the normal observing optical system.

13. An endoscope according to Claim 11, wherein the lens surface is a convex lens surface which is formed on the side of the confocal optical system.

14. An endoscope according to Claim 11, wherein the lens surface is a concave mirror which is formed on the side of the confocal optical system.

15. An endoscope according to Claim 11, wherein the lens surface comprises a diffraction-type optical device.

16. An endoscope according to Claim 10, wherein the illuminating means is a light guide bundle, and the normal observation optical system is an optical system which forms a two-dimensional image on a solid image pick-up device.

17. An endoscope comprising:

an inserting portion which can be inserted in a specimen;

a scanning optical system for illumination which is arranged in an edge of the inserting portion;

a light guide which is arranged in the edge of the inserting portion and which receives and transmits scattering light or reflecting light from a subject illuminated by the scanning optical system for illumination; and

a confocal optical system which is arranged in the edge of the inserting portion with a high resolution,

wherein the scanning optical system for illumination and the confocal optical system share a common wavelength split element at the position closest to the subject side.

18. An endoscope according to Claim 17, wherein the confocal optical system is a scanning optical system comprising a scanning mirror for two-dimensional deviation.

19. An endoscope according to Claim 17, wherein the confocal optical system is a scanning optical system including a structure in which two piezoelectric actuators driven in each single direction are arranged so as to make the displacing directions thereof perpendicular to each other.